

**PROPOSED OUTLINE OF FASEB CONFERENCE ON
MOLECULAR MECHANISMS OF CARCINOGENESIS.**

I. Topic Details

A. Title. Molecular Mechanisms of Carcinogenesis

B. Chairman.

Michael J. Weber
Professor of Microbiology
University of Virginia School of Medicine

Vice-chairman.

Michael W. Lieberman
Chairman
Department of Pathology
Fox Chase Cancer Center

C and D. Sub-topics and potential speakers.

1. Oncogenes, promoters and signal transduction.

E. Rozengurt, J. Pouyssegur, A. Gilman, J. Northup, N. Colburn,
P. Blumberg, L. Cantley, F. McCormick, M. Wigler, A. Saltiel.

2. Cell biology of oncogene action.

A. Horwitz, L. Rohrschneider, K. Burridge, J. Cooper, M. Weber,
R. Erikson, J. Feramisco, D. Stacey, T. Graf.

3,4. Regulation of gene expression.

R. Roeder, R. Tjian, I. Chen (trans-factors).
M. Karin, J. Whitlock, D. Lowy, E. Ziff (cis-elements).
R. Eisenman, T. Curran, M. Oren (nuclear onogenes).
B. de Crombrughe, M. Lieberman, H. Hanafusa, M. Goldfarb,
M. Gottesman (regulation of cellular genes).

5. Regulation of oncogene action.

B. Sefton, C. Sherr, J. Bolen (activity of oncogene products).
R. Weinberg, C. Marshall, B. Neel (anti-oncogenes).
G.P. Dotto, H. Herschman (phenotype suppression by normal cells).

6. Oncogene-carcinogen interactions.

S. Yuspa, A. Balmain, T. Bowden, T. Slaga (skin).
J. Wogan, M. Anderson, N. Fausto (liver).
M. Barbacid (breast).

7. Molecular epidemiology of human cancer.

W. Cavenee, D. Slayman, B. Vogelstein, M. Perucho, E. Chang,
R. White.

8. Molecular approaches to chemical carcinogenesis.

L. Loeb, J. Whitlock, H. Gelboin, E. Bresnick, I.B. Weinstein.

9. Molecular approaches to viral carcinogenesis.

H. zur Hausen, P. Howley, D. Lowy, D. DeMaio (papilloma viruses).
J. Summers, J. Taylor, B. Blumberg (hepatitis). I. Chen (HTLV).

E. Dates and venue.

August 13-18, 1989. Copper Mountain, Colorado.

F. Interest in this topic.

We are in a period of astonishingly rapid progress in the area of molecular carcinogenesis. As the general principles underlying oncogenesis and growth control are beginning to emerge, we have seen the unification of the areas of viral carcinogenesis with chemical carcinogenesis and of oncogenesis with endocrinology. Since oncogenes and proto-oncogenes are of fundamental significance in cellular homeostasis, issues concerning their action are of interest, not only to those who study cancer, but more broadly to investigators studying gene expression, development, receptor signalling and cellular biochemistry (especially the action of kinases).

The FASEB Carcinogenesis meeting in particular has provided in the past the only forum in which the major separate sub-disciplines involved in studies of carcinogenesis could meet: the chemical and the viral carcinogenesis groups; the persons interested in promotion; molecular biologists and oncogene specialists; and persons studying human cancer. Continued development of the broad, unifying principles in this area will be helped by continuing to bring these groups together.

II. Participation

A. Attendance. There is no question that attendance will be over 100. Even in 1987, when this meeting conflicted directly with the FASEB Protein Kinase meeting, attendance was at that figure. We intend to limit enrollment to 150.

B,C. Participants. We already have a computerized mailing list of over 500 names based on attendance at the related Oncogene Meeting, Cold Spring Harbor Meetings and ICN/UCLA Meetings. This list can readily be expanded. The meeting will be of interest to numerous societies within and outside of FASEB, including the Biological Chemists, Pathologists, Physiologists, Pharmacologists, the Cell Biologists, the American Society for Microbiology, the American Society for Virology and the American Association for Cancer Research.

D. Media for publicity. Journals: Science, Nature, Cell, J. Virology, Mol. Cell. Biol., Cancer Research. Direct mailings.

III. Level of interest

A. Previous meetings. Previous meetings on this topic were called "Mechanisms of Carcinogenesis." We have modified the title to emphasize its molecular orientation. The meetings were held in Vermont. The 1987 meeting was in mid-July, and had approximately 100 participants. The persons in attendance felt very positively about the value and quality of the meeting. The inter-disciplinary nature of the talks, the fact that the talks were long enough for a topic to be developed at length, and were delivered in general by the Principal Investigators (rather than post-docs and students) were all viewed as positive features, when we conducted an informal survey near the end of the conference. In general, the atmosphere was conducive to the exchange of ideas and to genuine learning. There was less emphasis on naked ego gratification than is apparent at some meetings.

B. Development of the field. As discussed above, the field is rapidly growing. Holding this meeting during alternate years is certainly not too frequent.

C. Conflicts with other meetings. The major conflict this past year was with the FASEB Protein Kinase meeting. Since many oncogene products are protein kinases, as is the major receptor for tumor promoters, scheduling the Protein Kinase meeting opposite the Carcinogenesis meeting resulted in numerous conflicts. This mistake will be avoided in 1989.

In addition to the Protein Kinase meeting, there are several other meetings on topics related to, but not overlapping this one:

1. The Oncogene Meeting is held at Hood College at the beginning of July. It consists of 10 minute talks almost exclusively devoted to the structure and regulation of oncogenes. There is very little presented which is biological, or which addresses the concerns of those who have studied human systems, chemical carcinogenesis or promotion. Surprisingly little is presented on the mechanisms of oncogene action or the interaction of oncogenes with the cell. There are 500 participants.

2. The Cold Spring Harbor RNA Tumor Virus Meeting is held in May, and has evolved to emphasize virus replication and expression rather than malignant transformation. It also consists of a series of 10 minute talks.

3. There is usually a Gordon Conference on Cancer. This has become very non-molecular.

Thus, although there are other conferences which are related, none of them could reasonably replace the FASEB Conference. This FASEB Conference provides a unique forum for scientific exchanges between the areas of molecular biology, chemical carcinogenesis and human oncology. The small size of the meeting, and the small proportion of presentations by post-docs and students results in genuine sharing of information.

IV. Support

In addition to our hoped-for support from the Council for Tobacco Research, we have initiated contacts with DuPont, Beckman and Biogen. Moreover, we anticipate that the NIH, Hoffman-LaRoche, Glaxo and Upjohn will continue to support this conference, as they have in the past. Industrial and foundation support is essential for the success of meetings such as this one, as many participants have difficulty paying the full amount of their airfare, registration, food and lodging. In particular, the inclusion of junior researchers and of foreign investigators is often contingent on the availability of financial support; it is these individuals who often provide the most novel contributions.

If the Council for Tobacco Research could provide \$3,000 for the support of this conference, it would go a long way toward making the conference a success.